Maple Valley Legacy Site

Final Presentation
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UW CEP 498

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UNIVERSITY of WASHINGTON

The City of MAPLE VALLEY

Agenda

- Street Design Concepts
- Cost Comparisons
- Potential Funding Sources
- Moving Forward: Next Steps

Maple Valley Legacy Site Scope of Work Overview

Phase I - Site Infrastructure

Scope of Work

- Development of three road schemes
- Cost estimates of road schemes
- Sources of funding

Preliminary Street Design Concepts

Basic Scheme - 56’ Width

Basic Scheme - 56’ Width

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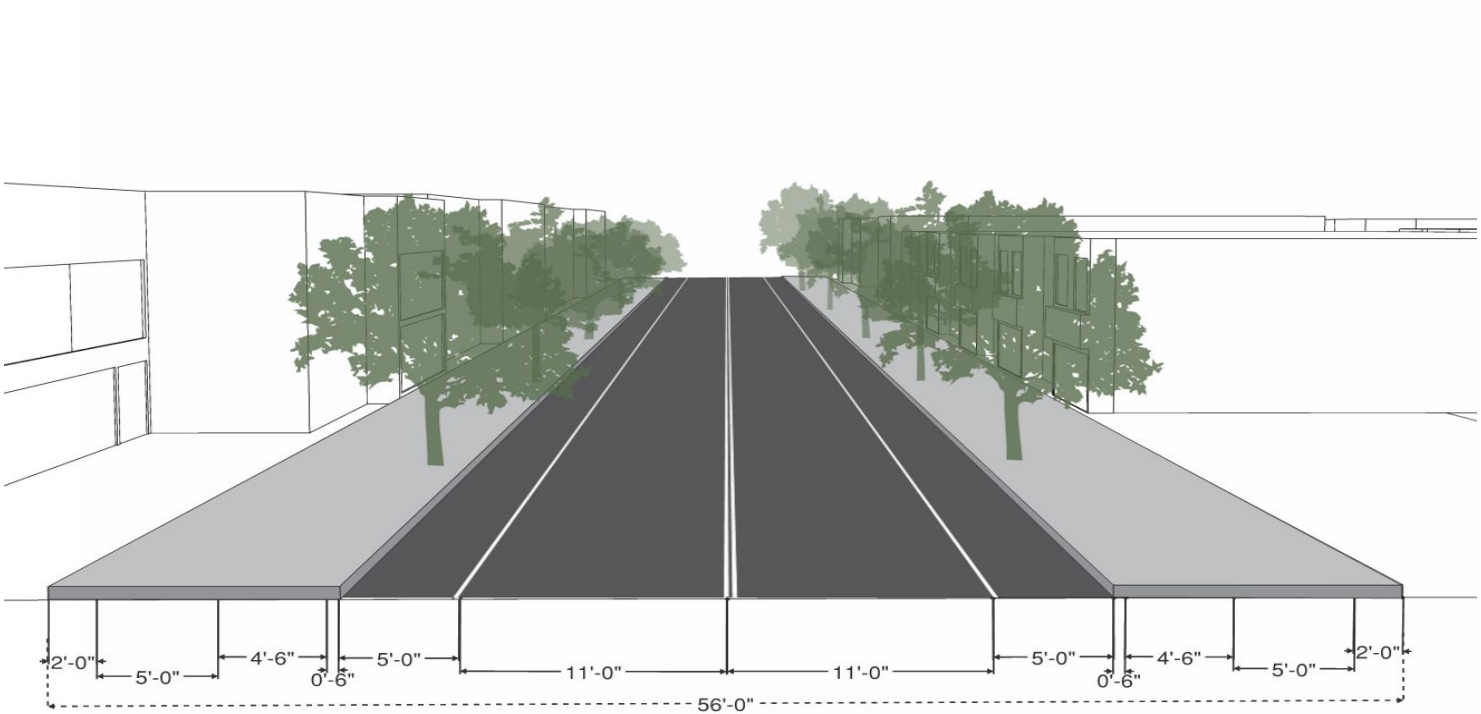

Preliminary Street Design Concepts

Boulevard Scheme - 63’ Width

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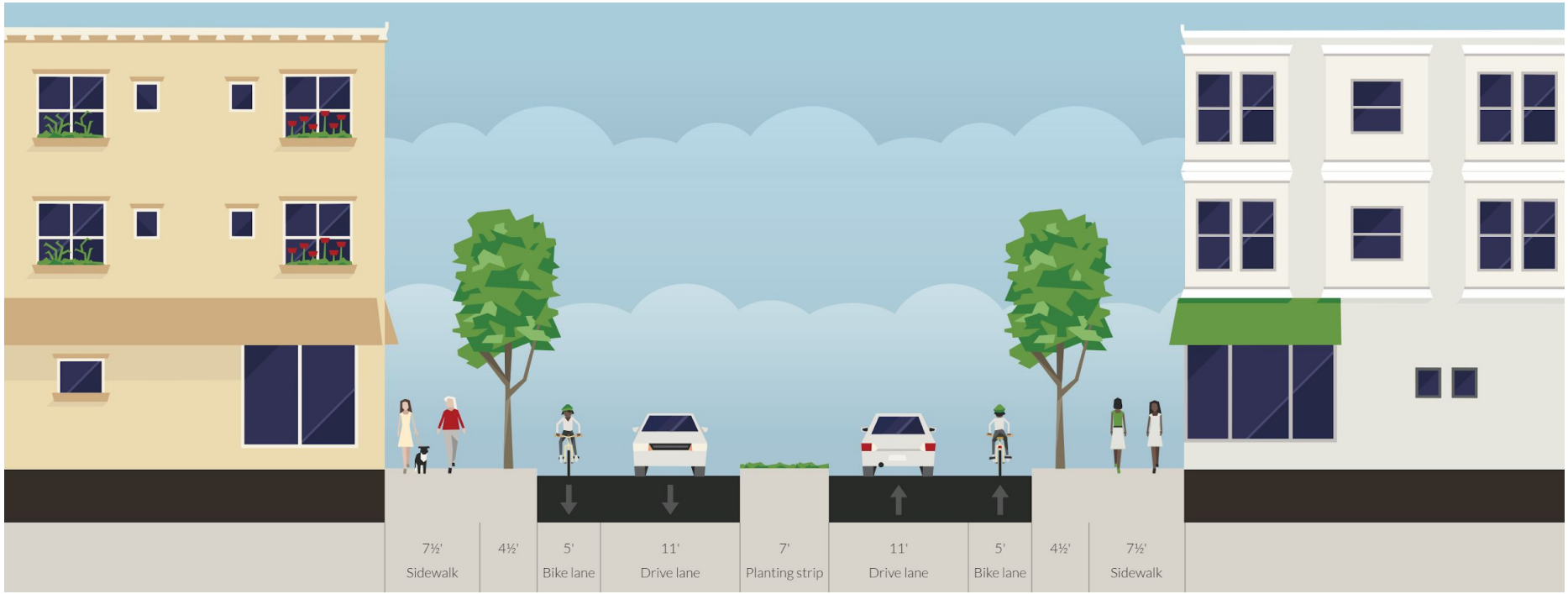
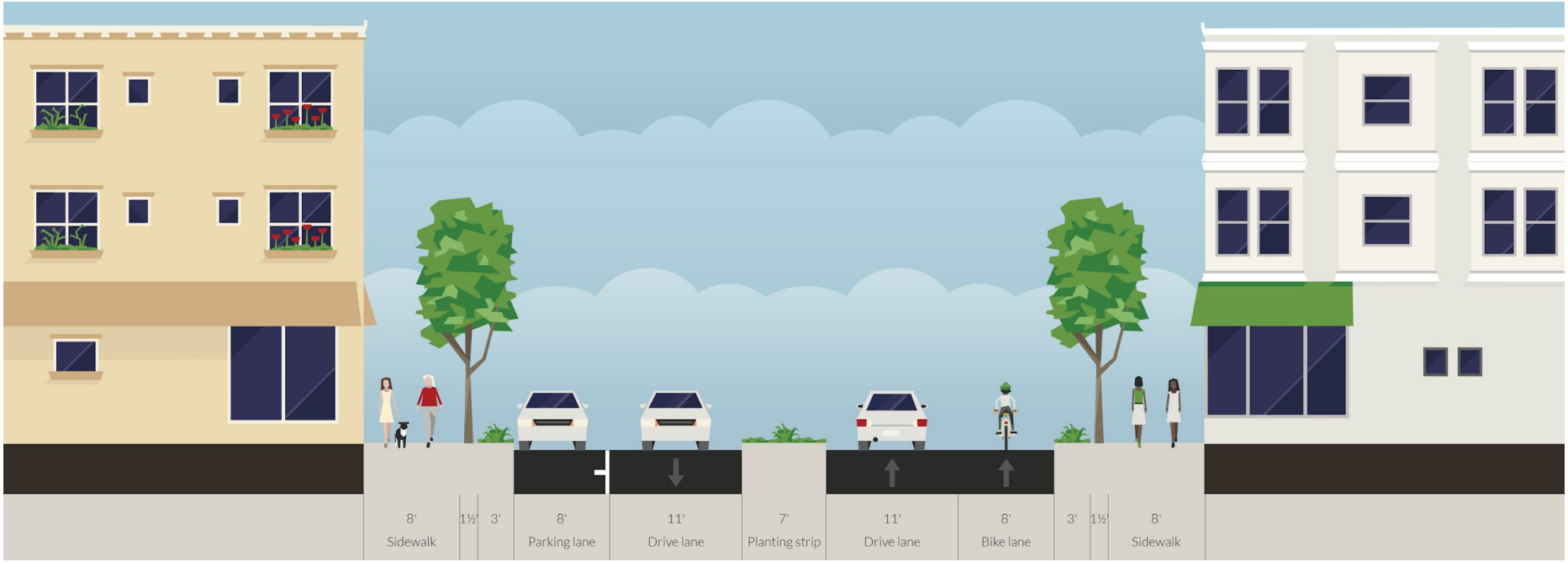


Boulevard Scheme - 63’ Width

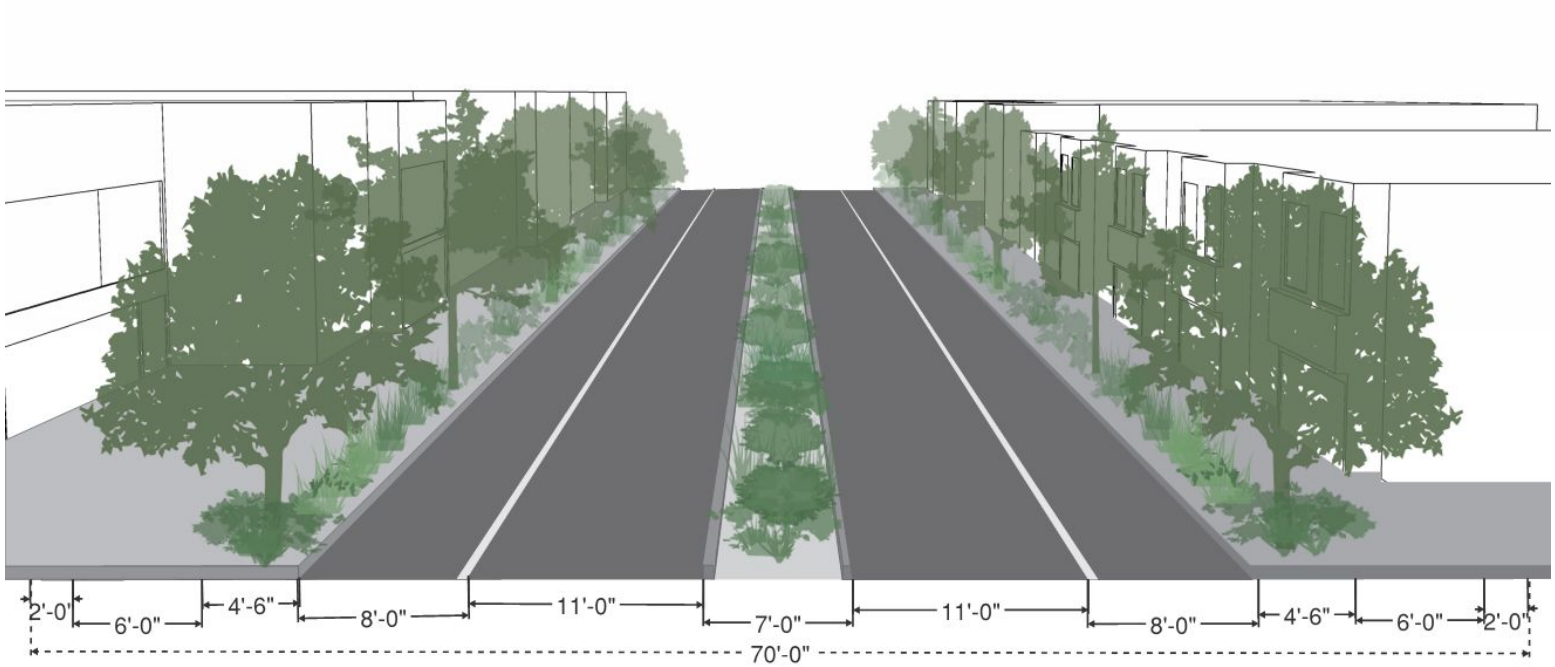
Preliminary Street Design Concepts

Boulevard Scheme w/Green Stormwater Infrastructure (GSI) - 70’ Width

Boulevard Scheme w/GSI - 70’ Width

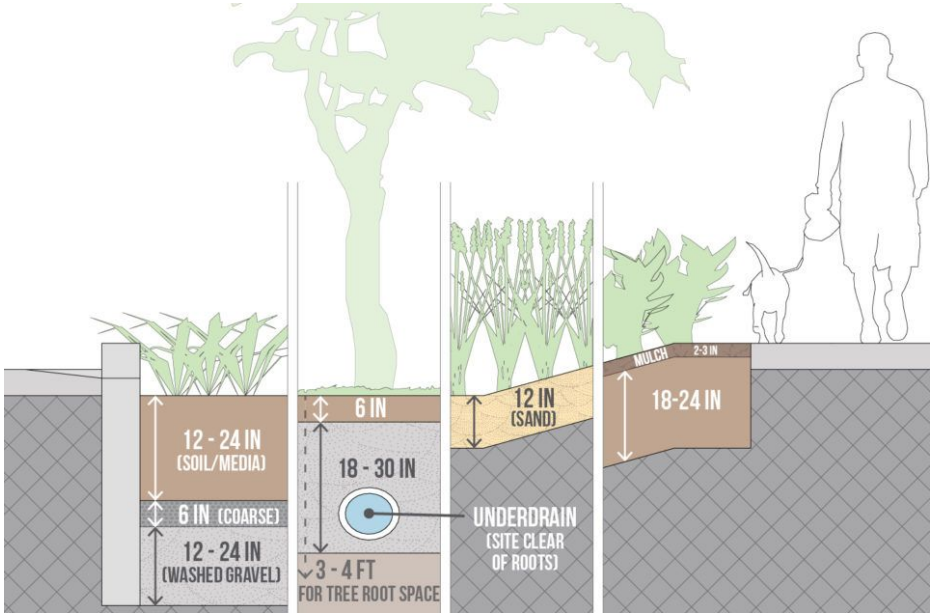


Boulevard Scheme w/GSI - 70’ Width



Green Stormwater Infrastructure

Across the country, local governments are integrating green stormwater infrastructure (GSI) into the streetscape to manage urban stormwater runoff. Implemented to reduce combined sewer overflows (CSOs), streetside GSI also treats polluted runoff and creates a thriving, pedestrian-friendly streetscape by providing physical buffers, reducing imperviousness, increasing opportunities for tree canopy, mitigating heat island effect, and promoting traffic calming.



https://nacto.org/publication/urban-street-stormwater-guide/stormwater-elements/bioretention-design-considerations/soil-media-plantings/
https://thefield.asla.org/2014/02/11/stormwater-infrastructure-streetscapes/

Green Stormwater Infrastructure (GSI)

GSI is used for pervious pavement, medians and strips to manage urban stormwater runoff.

Permeable/Pervious Pavement

Pervious pavements are most often applied on bikeways, parking lanes, and streets with lower vehicle traffic volumes and limited heavy vehicles. Sidewalks may also employ porous concrete to increase infiltrative area.

Stormwater Median

On wide boulevard and parkways, GSI can be coupled with greenways for bicycling and walking, providing attractive public space adjacent to stormwater management.

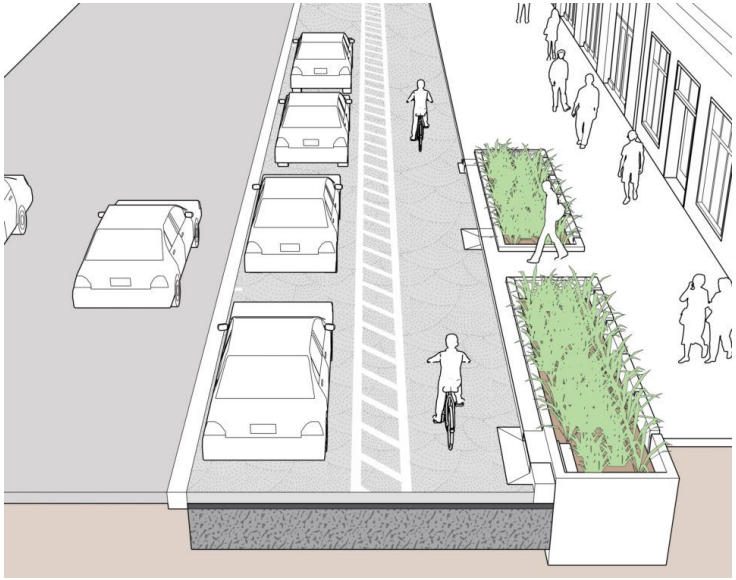
Stormwater Strip

Stormwater strips can integrate with sidewalks, medians, curbs, and other features. Depending on the desired configuration

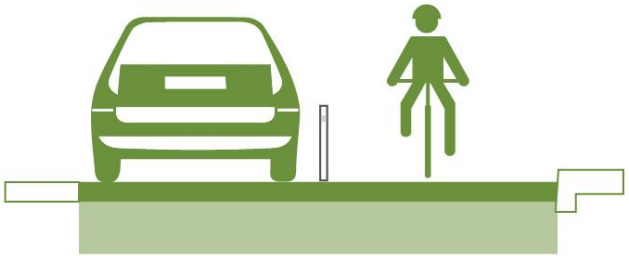
https://nacto.org/publication/urban-street-design-guide/street-design-elements/stormwater-management/pervious-pavement/
http://www.washingtonnature.org/fieldnotes/how-to-filter-2-million-gallons-of-stormwater-from-the-aurora-bridge

Permeable Pavement

Pervious pavements are most often applied on bikeways, parking lanes, and streets with lower vehicle traffic volumes and limited heavy vehicles. Sidewalks may also employ porous concrete to increase infiltrative area.



Permeable pavement in the roadway infiltrates runoff directly underneath, and is comprised of permeable interlocking concrete pavers or porous asphalt or concrete. Permeable paving is suitable in contexts with lighter use.



https://nacto.org/publication/urban-street-stormwater-guide/stormwater-elements/green-stormwater-elements/permeable-pavement/
https://nacto.org/publication/urban-street-stormwater-guide/planning-for-stormwater/solving-street-design-puzzle/

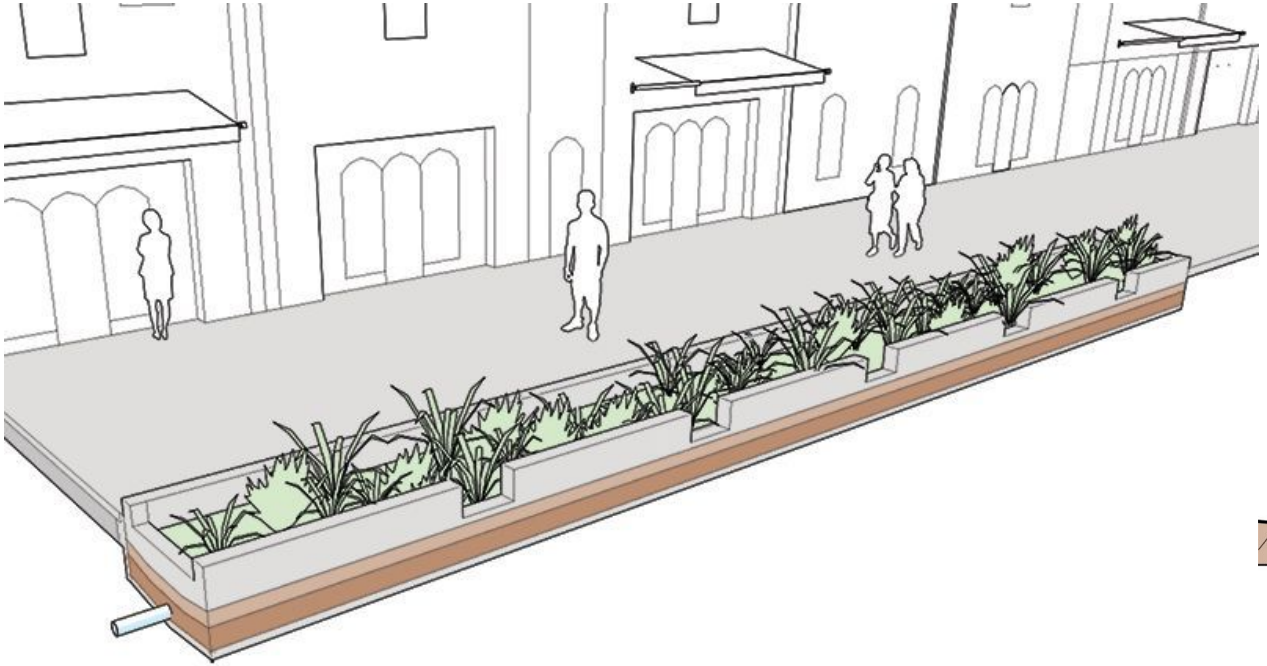
Stormwater Median

On very wide streets and parkways, green stormwater infrastructure can be coupled with greenways for bicycling and walking, providing attractive public space adjacent to stormwater management.

Wide medians used to separate traffic directions may be utilized for large amounts of water conveyance and infiltration.

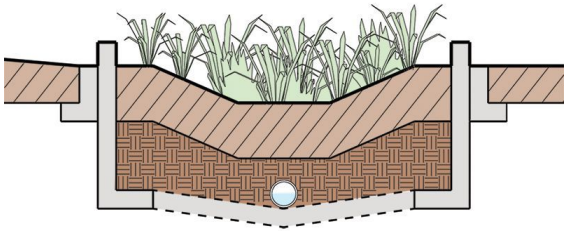
https://nacto.org/publication/urban-street-stormwater-guide/stormwater-elements/green-infrastructure-configurations/stormwater-median/

Stormwater Strip



Stormwater strips can integrate with sidewalks, medians, curbs, and other features. Depending on the desired configuration

Stormwater strips require long, continuous spaces to treat and filter pollutants.



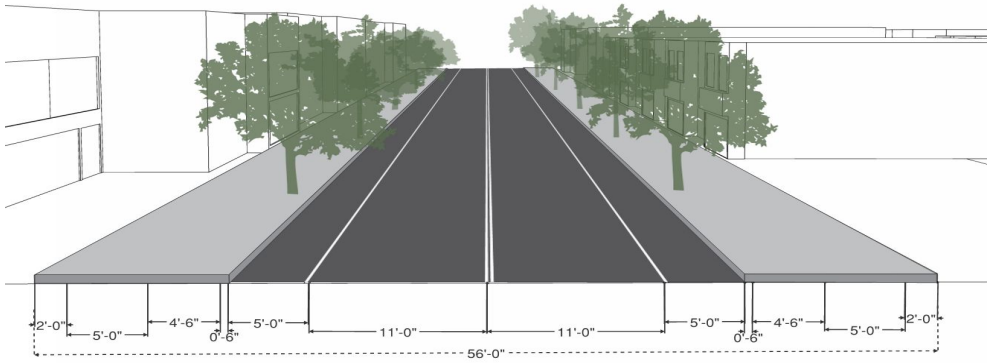
https://nacto.org/publication/urban-street-design-guide/street-design-elements/stormwater-management/pervious-strips/

Street Infrastructure Cost Comparisons

Basic, Boulevard, and Boulevard w/GSI Schemes

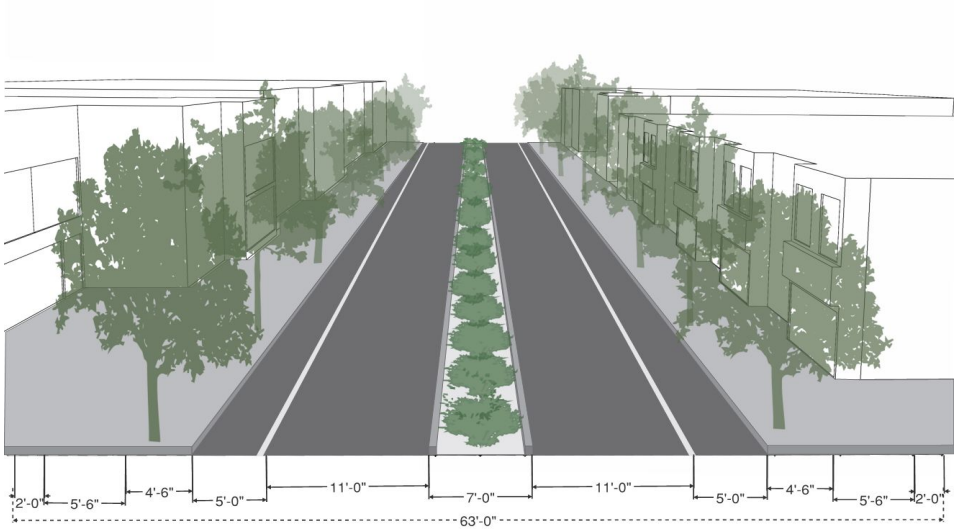
Street Infrastructure Cost - Basic

Cost Breakdown	Total Cost
Construction Costs Subtotal	$2,715,000
Contingencies	$271,000
Design Engineering @ 10%	$299,000
Construction Management @ 8%	$239,000
Right of Way	$0
Project Total Cost	**$3,524,000**
Est. Cost Per Linear Foot	**$1700**



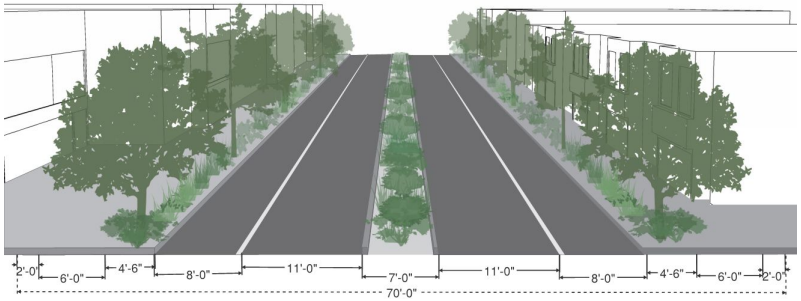
Street Infrastructure Cost - Boulevard

Cost Breakdown	Total Cost
Construction Costs Subtotal	$2,849,000
Contingencies	$285,000
Median	$597,000
Design Engineering @ 10%	$313,000
Construction Management @ 8%	$251,000
Right of Way	$0
Project Total Cost	**$4,295,000**
Est. Cost Per Linear Foot	**$2,000**



Street Infrastructure Cost - Boulevard w/GSI

Cost Breakdown	Total Cost
Construction Costs Subtotal	$2,943,000
Contingencies	$294,000
Design Engineering @ 10%	$324,000
Construction Management @ 8%	$259,000
Right of Way	$0
Permeable Pavement	$406,000
Stormwater Median (7’ Width)	$916,000
Biofiltration Strips (9’ total Width)	$177,000
Project Total Cost	**$5,319,000**
Est. Cost Per Linear Foot	**$2,500**



Street Infrastructure Cost - Summary

Cost Breakdown	Basic	Boulevard	Boulevard with GSI
Construction Costs Subtotal	$2,715,000	$2,849,000	$2,943,000
Contingencies	$271,000	$285,000	$294,000
Design Engineering @ 10%	$299,000	$313,000	$324,000
Construction Management @ 8%	$239,000	$251,000	$259,000
Right of Way	$0	$0	$0
Median	Not Applicable	$597,000	$916,000
Permeable Pavement	Not Applicable	Not Applicable	$406,000
Biofiltration Strips	Not Applicable	Not Applicable	$177,000
Project Total Cost	**$3,524,000**	**$4,295,000**	**$5,319,000**
Est. Cost Per Linear Foot	**$1,700**	**$2,000**	**$2,500**

Projected Infrastructure Funding Sources

Based on Maple Valley 2019 Six-Year Transportation Improvement Plan

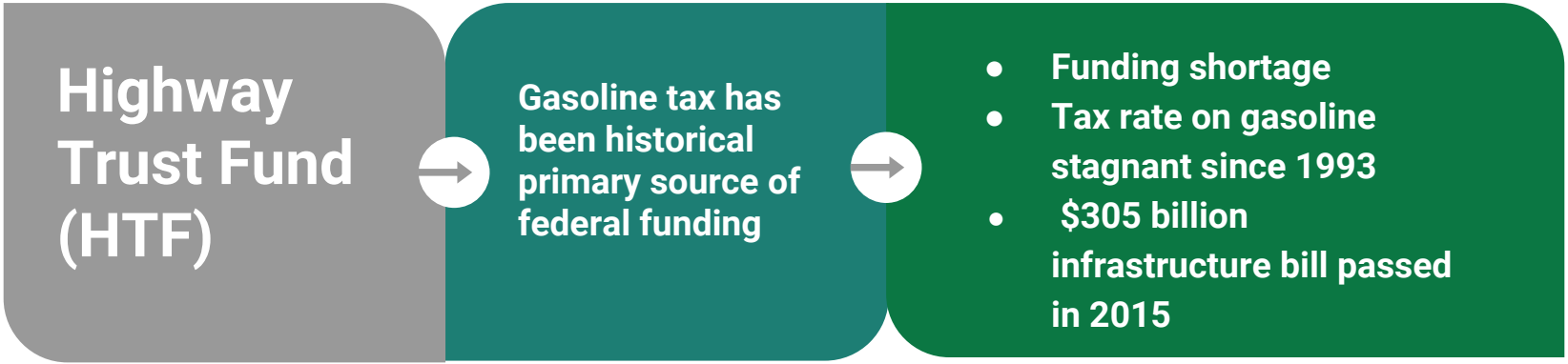
Funding Sources	Estimated Percentage
Real Estate Excise Tax (REET)	15%
Transportation Impact Fee (TIF)	28%
Transportation Benefit District (TBD)	5%
Grants	41%
Stormwater Management Fund (SWM)	9%
Private/Mitigate	Not Applicable
Other	2%

Infrastructure Funding Sources

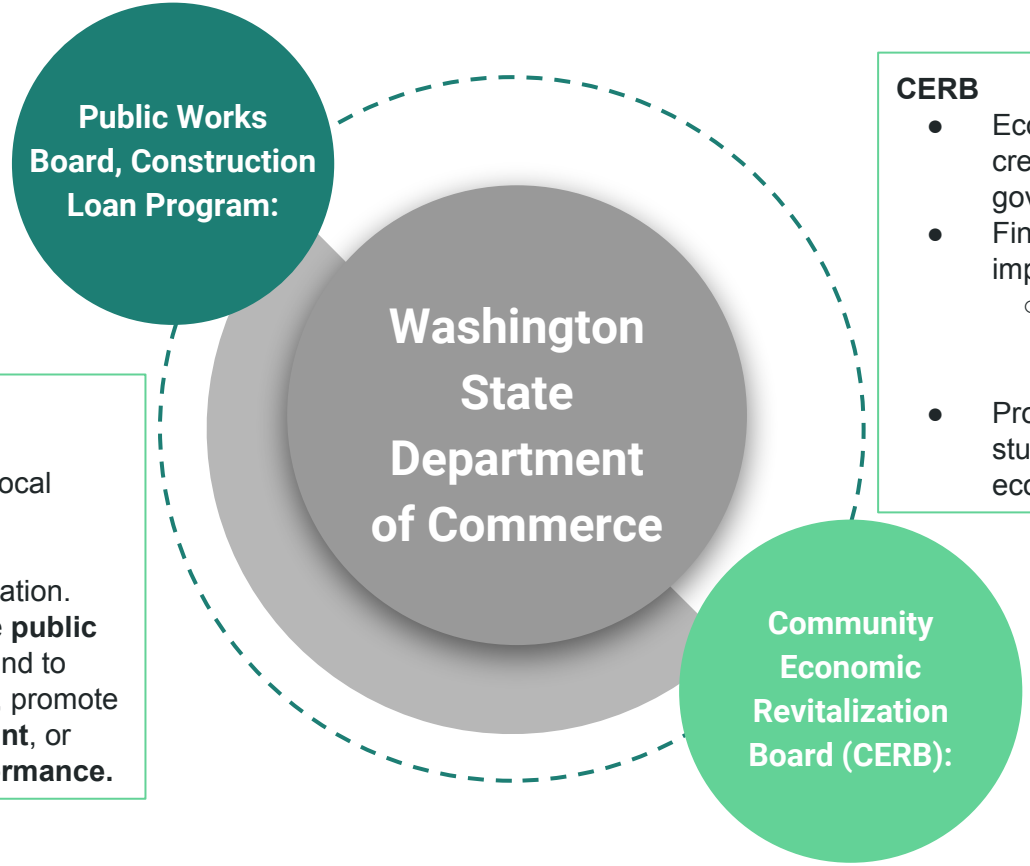
Federal, State, and Local Levels

Infrastructure Funding Sources - Federal

Federal: Mainly allocated to federal highways and transit projects



Infrastructure Funding Sources - State



The Public Works Board, Construction Loan Program

- Low-interest loans for local governments
- Public infrastructure construction & rehabilitation.
- Projects must: Improve **public health & safety**, respond to **environmental** issues, promote **economic development**, or upgrade **system performance.**

CERB

- Economic development via job creation in partnership with local governments.
- Finances public infrastructure improvements that:
  - Encourage **new private business development and expansion.**
- Provides limited funding for studies that evaluate high-priority economic development projects.

https://www.commerce.wa.gov/

Infrastructure Funding Sources - State

WA State Transportation Improvement Board (TIB)

The Washington State Transportation Improvement Board (TIB)

- TIB is an independent state agency, created by the Legislature, that distributes and manages street construction and maintenance grants to cities and urban counties throughout Washington State.
- TIB Urban Programs serve cities with a population of 5,000 or more and counties with urban unincorporated areas.
- TIB issues a call for projects each **June for project selection done in November.**
- During the call for projects, TIB engineering staff conduct funding program workshops at various locations throughout the state. see the TIB Training page.

Complete Streets Program

- TIB has created the Complete Streets Award as a new funding opportunity for local governments.
- The Complete Streets Award is money given to any city or county in Washington state who has an adopted complete streets ordinance to accommodate all users, including pedestrians, transit users, cyclists, and motorists.
- As of 2018 Maple Valley has a Complete Streets Ordinance No O-18-640
- Funding cycle **opens in July and is due in December.**

Source: http://www.tib.wa.gov/grants/grants.cfm

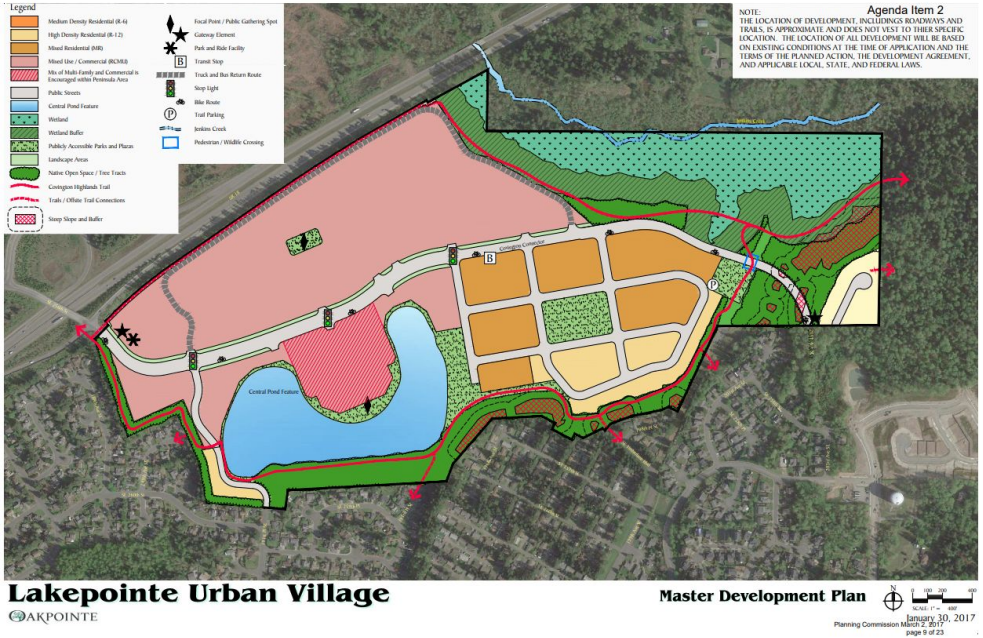
Infrastructure Funding Sources - State & Local

Type of Funding	State Level	Local Level	Details
• **Municipal Bonds**	✓	✓	• General obligation bonds • Revenue bonds
• **Special Fuel Tax**	✓	✓	• Approved for use in WA state • Voter approval required • Less impactful w/fuel efficient vehicles
• **Special Sales Tax**	✓	✓	• Approved for use in WA state • Voter approval required
• **Vehicle Registration Fees**	✓	✓	• Approved for use in WA state • Already being utilized to fund certain WA state projects

Local Case Study

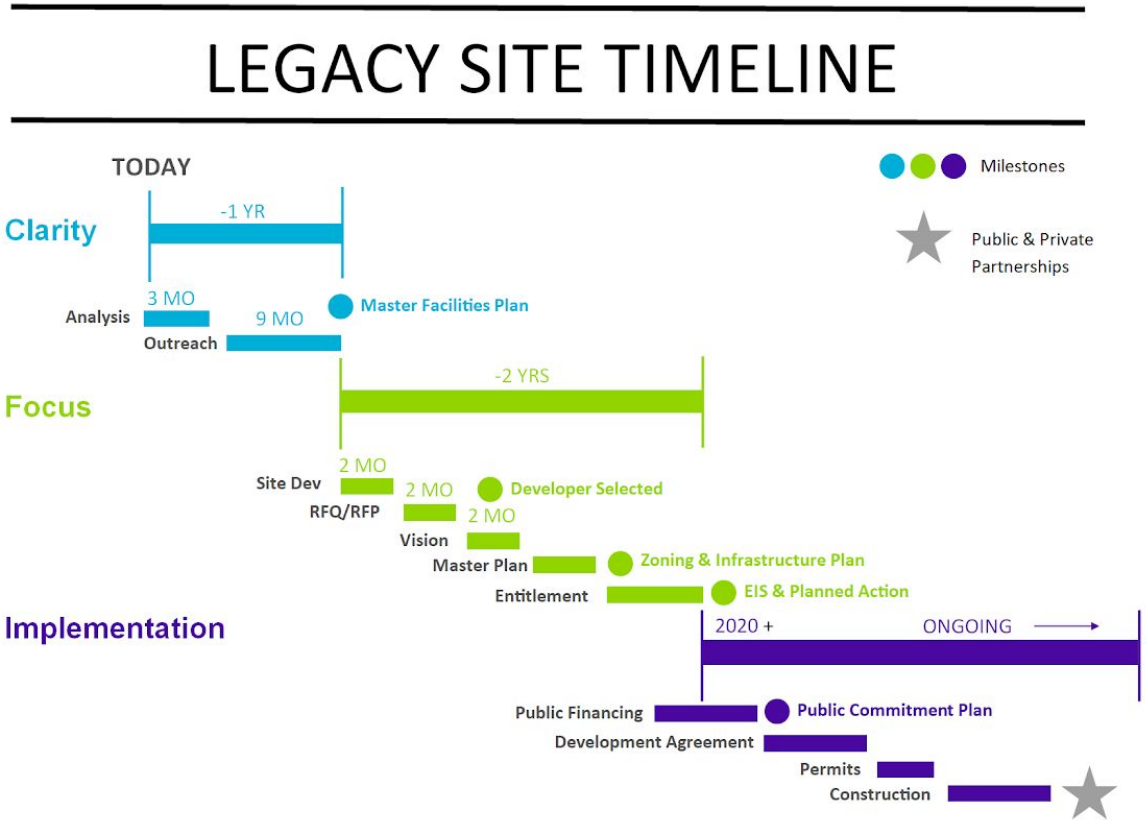
City of Covington: Lakepointe Urban Village Subarea

- **Covington Connector**
  - Two phases - first: modifications to existing road infrastructure
  - Second: **construction of new roadway**
- $24 million - Connecting Washington Funds
- Connecting Washington:
  - WSDOT program
  - 2015 funding package: $16 billion
  - 16-year program, funded primarily by an 11.9-cent gasoline tax increase that was fully phased-in on July 1, 2016.
- Additional funding - development fees



2016 Maple Valley Legacy Site Task Force Timeline

- **Phase 1:** Construction of main street infrastructure, most likely to be publicly funded on the local level
- **Phase 2:** Construction of arterial/secondary streets related to development of each specific parcel - opportunity to explore public private partnerships (P3)



Recommendations & Next Steps

- Immediate Future:
  - Explore public funding sources as primary option for Phase 1 infrastructure construction
- Moving Forward:
  - Initiate request for proposal (RFP) process from developers
  - Public private partnerships for individual parcels

Thank you & Questions

Contacts

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